

PENZES, ISTWAN

HUNGARY / Cultivated Plants. -- Potatoes. -Vegetables. Melons. M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34714

Author : Penzes, Istwan

Inst : Not given

Title : Soil Geography for the Red Pepper of Szeged.

Orig Pub : Foldr. ert, 1957, 6, Nol, 57-77

Abstract : Geological and geomorphological characteristics pertaining to the basic regions developing the cultures of red pepper are cited. These rayons are located in Hungary in the vicinity of the city of Szeged. Analysis of soils is given; the requirements of red pepper, depending on different compositions of soils, are studied, as well as its yield in dependence to different soils; 5 types of soils, discussed with

Card 1/2

72

FENZES, I.

Data on the agrogeology of the red paprika of Szeged.

p. 57. (FOLDROJZI ERTESITO) Vol. 6, no. 1, 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

PENZES, Laszlo

Experimental investigation of H localization during the gravidity of rats. Biol kozl 7 no.1/2:73-81 '59.

1. Allattenyesztési Kutató Intézet, Allatelettani- és Takarmány-
zasi Osztálya, Budapest. Osztályvezető: Dr. Tangl Harald.

*

FENZES, Laszlo BARNA, Jozsef

Effect of feeding diets containing proteins in various degrees
on the regeneration of the liver of rats. Biol tud kozl MTA
5 no.3-4:281-293 '62.

1. Allattenyesztési Kutató Intézet Élettani Osztálya.

*

PENZES, L.

Studies on distribution of N in the rat during pregnancy. Acta
biol. acad. sci. Hung. 15 no.1:19-37 '64.

1. Department of Physiology, Research Institute for Animal Husbandry,
Budapest (Head: H. Tangl).

BERTOK, Lorand; PENZES, Laszlo; SZEKY, Antal

Effect of diets containing different quantities and qualities of proteins on the sexual activity of female albino rats. Kiserl. orvostud. 14 no.1:41-48 Mr '62.

1. Allatelettani Kutato Intezet, Budapest es Orszagos Allategeszsegugyi Intezet Korszozettani Osztalya, Budapest.
(PROTEINS nutrition & diets) (SEX BEHAVIOR)

PENZES, Laszlo

SURNAME (in caps); Given Names

3

Country: Hungary

Academic Degrees: [not given]

Affiliation: Department of Animal Physiology of the Research Institute
of Livestock Breeding (Allattenyesztesi Kutato Intezet,
Allatelettani Osztalya); Director (Igazgato); Harald TANGEL,
Dr, Professor

Source: Budapest, Biologiai Kozlemenyek, Vol IX, No 1, 1961, pp 87-95

Data: "N Anabolism of the Liver of Pregnant Rats as Related to the
Change in some Constituents of Serum Proteins."

PENZES, Laszlo (Budapest, II., Kitaibel Pal u.4); TANGL, Harald, dr., prof.,
igazgato

N anabolism of the liver of pregnant rats as related to the change
in some constituents of serum proteins. Biol kozl 9 no.1:87-95 '61.

1. Allattenyesztési Kutató Intézet, Allatelettani Osztálya.

TIMAR, A.; VETRO, J.; PENZES, M.

Experiences in incidence and spread of enteral infections in infant and child. Acta med. hung. 6 no.3-4:379-389 1954.

1. Kinderklinik der Medizinischen Universität und Station des Staatlichen Instituts für Gesundheitswesen, Szeged.

(GASTROINTESTINAL DISEASES, in inf. & child
dyspepsia, etiol. & seasonal variations)

PENZES, Tibor; PATAKI, Gyorgy

Determination of calcium and water content of the sclera in calf and cattle eyes. Szemeszet 100 no. 2:91-94 Je '63.

- 1.A papai Korhaz-Rendelointezet (igazgato: Daroczy Gyula foorros, egy. docens) Szemeszeti Szakrendelesenek (r.i. foorros: Penzes Tibor) es Korhazi Laboratoriumanak (foorros: Pataki Gyorgy) kozlemenye.
(SCLERA) (TUBERCULOSIS, BOVINE) (CALCIUM) (WATER)

PENZES T. EXCERPTA MEDICA Sec.12 Vol.12/2 Ophthalmology Feb. 58

193. TRANSIENT MYOPIA IN ACUTE GASTRITIS. Transitorische Myopie bei akuter Gastritis. *Pénzes T.* Univ.-Augenklin., Debrecen (Ungarn). KLIN. MBL. AUGENHEILK. 1957, 130/6 (859-861)

A transient myopia of 3.5 and 2.5 dptr. was observed after acute gastritis. Atropin had no influence on the condition. Spasm of the ciliary muscles may also be excluded. The origin remained obscure.

PENZES M.

TIMAR, Alice, dr.; VINTRO, Janos, dr.; PENZES, Margit, dr.

Experiences in occurrence and spread of enteral infections in
infant and child. Orv. hetil. 95 no.37:1010-1014 12 Sept 54.

1. A szegedi Gyermeklinika es a szegedi OKI Vizsgalallomas
kozlemenyse

(GASTROINTESTINAL DISEASES, in inf. & child
incidence & epidemiol. in hosp.)

(DIARRHEA, in inf. & child
incidence & epidemiol. in hosp.)

PENZESNE, J.S.

PENZESNE J.S., M.D.

Adatok a Supracillin Palik (procain-penicillin) hosszantartó
terápiás alkalmazásához és depot hatásához. [Supracillin
Palik (procain-penicillin); its therapeutic use and depot
effect/ Orv. hetil. 92:18 30 Apr 50 p. 551-3.

Pharmaceutical Institute (Acting Director -- Dr. Bela
Issakuts) and the First Surgical Clinic, both of Budapest
University.

CML 19, 2, Aug. 50

PENZESNE, J.S.; KOS, R.

Supracillin Palik (procain-penicillin); its therapeutic use and depot effect. Orv.hetil. 91 no.18:551-55; 30 Ap '50. (CLML 19:2)

1. Pharmaceutical Institute (Acting Director -- Dr. Bela Issekutz) and the First Surgical Clinic, both of Budapest University.

PENZIK, A. S.; SPELTER, V. B.; KONOVALOV, M. N.

"Experiences with the anticoagulants Omephin and Eskusane in diseases of cerebral blood vessels."

report submitted for 3rd Hungarian Conf, Therapy & Pharmacology, Budapest, 5-12 Oct 64.

Medical Inst, Neurological Faculty & the VILAR Medico-Biological Dept, Riga.

PENZIKOVA, G.A.; MIKHAYLOVA, G.R.

Lysis of the cells of *Actinomyces fradiae* caused by lysozyme.
Mikrobiologiya 32 no.3:465-470 My-Je'63 (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,
Moskva.

LEVITOV, M.M.; PANEZIKOVA, G.A.

production of enzyme preparations from the mycelium of
Actinomyces fradiae by using various methods of cytolysis.
Mikrobiologiya 34 no.3:385-390 My-Je '65.

(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,
Moskva.

PENZIKOVA, G.A.; LEVITOV, M.M.

Dehydrogenase activity in the *Actinomyces fradiae* culture.
Mikrobiologiya 34 no.5:781-785 S-O '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,
Moskva.

PENZIMONZH, I.I.

AVETISYAN, Kh.K.[deceased]; ONAYEV, I.A.; PENZIMONZH, I.I.; SOLOV'YEVA,
V.D.

Investigation of the processes of smelting copper concentrates in
slags with high silicon content. Vest.AN Kazakh. SSR 11 no.2:57-65
P '55. (MIRA 8:4)

(Copper—Electrometallurgy)

PENZINONZI, I.I.

"Studying the Conditions for Igniting Metallic Sulfides." Cand Tech Sci, Inst of Metallurgy and Ore Enrichment, Acad Sci Kazakh SSR, Alma-Ata, 1954. (RZhKhim, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)

SO: Sum. No. 598, 29 July 55

PENZIMONZH, I.I. (Alma-Ata); KOZHAKHMETOV, S.M. (Alma-Ata)

Smelting complex metal concentrates and ores in suspension with
an oxygen blow. Izv.AN SSSR. Otd.tekh.nauk. Met.1 topl. no.4:
44-50 JI-Ag '62. (MIRA 15:8)
(Nonferrous metals--Metallurgy) (Distillation)

РЕНЗИМОНЗ, И. И.

USSR/ Chemistry - Metallurgy

Card 1/1 Pub. 123 - 6/11

Authors : Avetisyan, Kh. K.; Onayev, I. A.; Penzimonzh, I. I.; and Solovyeva, V. D.

Title : Study of the melting processes of cupric concentrates in high Si-slag

Periodical : Vest. AN Kaz. SSR 2, 57 - 65, Feb 1955

Abstract : The melting processes of cupric concentrates and their physical properties at high temperatures were investigated with the perspective of adapting the electrochemical methods in metallurgy. The results indicate that the melting concentrates and ores and the derivation of high Si-slugs ($\text{SiO}_2 > 54\%$) is possible only by electric smelting. The flux consumption in this case can be reduced to a minimum and the final results are highly satisfactory. It was established that the melting point of high Si-slugs depends upon the SiO_2 and CaO contents in the concentrate. Four USSR references (1937 - 1947). Tables; graphs; drawing.

Institution:

14(8)

PHASE I BOOK EXPLOITATION SOV/3346

Penzimonzh, Ivan Ivanovich

Vosplamneniye sul'fidov tyazhelykh metallov (Inflammability of Heavy Metal Sulfides) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 94 p. 570 copies printed.

Sponsoring Agency: Akademiya nauk Kazakhskoy SSR. Institut metallurgii i obogashcheniya.

Ed.: L.N. Moskvicheva; Tech. Ed.: P.F. Alferova.

PURPOSE: This booklet is intended for metallurgists, chemists, mining engineers and technical personnel concerned with problems of preventing underground fires.

COVERAGE: An attempt is made to review theoretical and experimental studies of the spontaneous combustion of heavy metal sulfides. The author analyzes studies made by various scientists in an effort to determine the cause of spontaneous combustion of pyritic

Card 1/5

Inflammability of Heavy (Cont.).

SOV/3346

ores and to investigate the mechanism of oxidation of sulfides. He describes methods used to study the problem, laboratory equipment for analyzing oxidation reactions and lists mineral samples used for determining the effect of grain size on the ignition of sulfides. Equations indicating the combustion point of pyrite, galenite, chalcopyrite, sphalerite and pyrrhotite are presented. The effect of such external factors as the amount of oxygen in the air, humidity and presence of sulfuric anhydride on the ignition point of sulfides is also analyzed. Moreover, the author indicates the ignition temperature of some industrial concentrates of lead, zinc and copper of various compositions. Summing up the results of recent experiments and previous studies he concludes that the ignition point of sulfides is not a thermodynamic constant for a given mineral but a variable depending on numerous factors. As a result, the theory of sulfide oxidation has been revised and supplemented with new findings. There are 42 references: 38 Soviet, 2 English, 1 German and 1 Japanese.

Card 2/5

Inflammability of Heavy (Cont.)

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Inflammability of Heavy (Cont.)

SOV/3346

Bibliography

AVAILABLE: Library of Congress (QD 181 .S1P4)

Card 5/5

91

TM/jb
4-15-60

DONCHENKO, P.A.; PENZIMONZH, I.I., otv. red.; UTEPOV, Zh.K., tekhn.
red.

[Use of slag-volitization apparatus at the V.I.Lenin Lead and
Zinc Combine of Ust'-Kamenogorsk] Opyt ekspluatatsii shlakovo-
zgonochnoi ustanovki na Ust'-Kamenogorskom svintsovo-tsinkovom
kombinate im. V.I.Lenina. Alma-Ata, TSentr. in-t nauchno-
tekhn. informatsii, 1960. 17 p. (MIRA 15:4)

(Ust'-Kamenogorsk--~~Lead~~--Metallurgy)

(Ust'-Kamenogorsk--Zinc--Metallurgy)

PENZIMONZH, I.I.

Suspension roasting of concentrates, Trudy Inst. met. i obogashch.
AN Kazakh. SSR 3:105-123 '60. (MIRA 14:6)
(Nonferrous metals--Metallurgy)

PENZIMONZH, I.I., kand.tekhn.nauk; SHCHUROVSKIY, kand.tekhn.nauk; KOZHAKHMETOV, S.,
inzh.

Testing of a new method of flash smelting of copper concentrates.
TSvet. met. 34 no.6:39-44 Je '61. (MIRA 14:6)

1. Institut metallurgii i obogashcheniya AN KazSSR.
(Copper—Metallurgy)

PENZIMONZH, I.I.; KOZHAKHMETOV, S.

Distribution of lead, zinc, molybdenum, and rhenium in the products of smelting copper concentrates in suspension. Trudy Inst. met. 1 obogashch. AN Kazakh. SSR 4:48-50 '62. (MIRA 15:8)
(Nonferrous metals—Metallurgy)

KOZHAKHMETOV, S.M.; PENZIMONZH, I.I.; TSEFT, A.L.; TUMARBEKOV, Z.T.

Volatilization rate of lead sulfide in the atmosphere of
various gases at $900^{\circ} \div 1400^{\circ}\text{C}$. Vest. AN Kazakh SSR 21
no.4:64-70 Ap '65. (MIRA 18:5)

PENZIN, Il'ya Dmitriyevich

[Nanay District; its economic geography] Hanaiskii raion;
ekonomiko-geograficheskaya kharakteristika. Khabarovsk,
Khabarovskoe knizhnoe izd-vo. 1961. 125 p.

(MIRA 16:12)

(Nanay District--Economic geography)

PENZIN, KONSTANTIN VASIL'YEVICH

544N/5

390

.P9

Chernomorskiy flot v oborone Odéssy (1941 god) (The Black Sea Fleet in defense of Odessa) Moskva, Voenizdat, 1956.
125 p. illus., diagrs., maps, ports.

AVS

PENZIN, Konstantin Vasil'yevich; SOLOV'YEV, N.I., podpolkovnik, redaktor;
MEDNIKOVA, A.M., tekhnicheskii redaktor.

[The Black Sea Fleet in the defense of Odessa (1941)] Chernomorskii
flot v oborone Odessy (1941 god). Moskva, Voen.izd-vo M-va obor.
SSSR, 1956. 125 p. (MLRA 10:4)
(Odessa--World War, 1939-1945--Naval operations)

PENZIN, V., sudovoditel'

The ship's log books should be altered. Rech. transp. 22 no.9:
51 S '63. (MIRA 16:10)

1. Vostochno-Sibirskoye parokhodstvo.

PARFIANOVICH, I.A.; PENZINA, E.E.; PENZIN, Yu.G.

Luminescence of excited silver centers in the crystal phosphors NaCl -
Ag and NaBr - Ag. Izv. vys. ucheb. zav.; fiz. 8 no.2:150-155 '65.
(MIRA 18:7)

1. Irkutskiy gosudarstvennyy universitet imeni Zhdanova.

PARFIAMOVICH, I.A.; PENZINA, E.E.; PENZIN, Yu.G.

Photoluminescence of ionic and induced luminescence centers in
KBr - Ag single crystals. Izv. vys. ucheb. zav.; fiz. 8 no.1:
94-98 '65. (MIRA 18:3)

1. Irkutskiy gosudarstvennyy universitet imeni Zhdanova.

PARFLANOVICH, I.A.; PENZINA, E.E.; PENZIN, Yu.G.

Induced luminescence of alkali halide phosphors activated by silver. Izv. AN SSSR. Ser.fiz. 29 no.3:431-433 Mr '65.

(MIRA 18:4)

1. Irkutskiy gosudarstvennyy universitet.

PARFIANOVICH, I.A.; PENZINA, E.E.; PENZIN, Yu.G.

Luminescence of excited silver centers in the crystal phosphors NaCl -
Ag and NaBr - Ag. Izv. vys. ucheb. zav.; fiz. 8 no.2:150-155 '65.
(MIRA 18:7)

1. Irkutskiy gosudarstvennyy universitet imeni Zhdanova.

S/137/61/000/012/047/149
A006/A101

AUTHOR: Penzimonzh, I. I.

TITLE: Melting of concentrates in suspended state

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 28, abstract
129197 ("Tr. In-ta metallurgii i obogashcheniya, AN KazSSR", 1960,
v. 3, 105 - 123)

TEXT: The author analyzes advantages of melting Cu-concentrates in suspended state as compared to reverberatory melting, and conditions required to bring about melting in suspended state. He presents a design of experimental furnaces and describes cyclonic melting at the Balkhash plant, raising the efficiency by a factor of 2 as compared to reverberatory melting. The information includes experiences made with melting in suspended state at Finnish, Canadian and other plants, which also confirm the advantages of this method. A mixture of Cu-concentrates without fluxes was melted on an experimental furnace of the Institute of Metallurgy and Concentration of AS KazSSR. The air was heated up to 270°C, thus reducing fuel consumption by a factor of 3. When the blast was enriched with up to 60% O₂, melting was conducted without fuel. Specific fusion was 1.5 times

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Melting of concentrates in suspended state

S/137/61/000/012/047/149
A006/A101

higher than in reverberatory melting, Cu extraction was 93 - 94%. In the dusts Pb, Re, Mo, Zn, were concentrated, i.e. the major portion of volatile metals was sublimated. On the basis of experiences made with melting in suspended state, a method is suggested of redesigning reverberatory furnaces for melting in suspended state on cold blast with addition of coal dust. The efficiency of the furnaces is then raised by a factor of 1.5; Cu content in the mattes increases and fuel consumption is reduced. There are 19 references. ✓

K. Ukolov

[Abstracter's note: Complete translation]

Card 2/2

ПЕНЗИМОНЕН, И.И.
CHERNOV, F.G.; PENZIMONZH, I.I.

Heating reverberatory furnaces with the aid of muffle precombustion
chambers at the Balkhash Copper-Smelting Mill. TSvet.met. 28
no.4:73 JI-Ag '55. (MIRA 10:11)

1. Balkhashskiy medeplavil'nyy zavod.
(Smelting furnaces)

PENZIN, K.V., kapitan 1-go ranga

Political and military aspects of the second front. Mor. sbcr.
47 no.12:87-91 D '63. (MIRA 18:12)

PENZIN, L.I.

Connecting the amplifying wire without disconnection of the
overhead contact system. Elek.i tepl.tiaga 6 no.2:18-20 F
'62. (MIRA 15:2)

1. Zamestitel' nachal'nika Barabinskogo uchastka energosnabzheniya
Zapadno-Sibirskoy dorogi.
(Electric railroads--Wires and wiring)

~~PENZIN, L.I.~~

Modernization of current relays. Elek.1 tepl.tiaga 4 no.1:
21-22 Ja '60. (MIRA 13:4)

1. Inzhener 4-go uchastka energosnabzheniya stantsii Isil'-Kul',
Omskoy dorogi.

(Electric relays)

PAKHOMOV, V.Ya., inzh.; PENZIN, L.I.; ARKHIPOV, L.P.; SHILOV, A.S.,
starshiy prepodavatel'

The mercury-arc rectifier has been installed outside the traction
substation. Elek. i tepl. tiaga 6 no.11:12-13 N '62.

(MIRA 16:1)

1. Zamestitel' nachal'nika Barabinskogo uchastka energosnabzheniya
(for Penzin).
2. Nachal'nik tyagovoy podstantsii Kozhurla (for
Arkhipov).
3. Omskiy institut inzhenerov transporta (for Shilov).
(Mercury-arc rectifiers) (Electric railroads--Substations)

FENZNER, R.L.

307/1700

PHASE I BOOK EXPLANATION

24(7)

L'ov. Bulvaraitet

Materialy I Vsesoyuznogo sveshchaniya po spektroskopii, 1956.
t. III: Atomnaya spektroskopiya (Materials of the 10th All-Union
Conference on Spectroscopy, 1956. Vol. 3: Atomic Spectroscopy)
/Dov. ind-vo L'vovskogo univ.: 1958. 568 p. (Soviet Acad. Sci.:
Naukovedy sbornik, vyp. 4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR, Komissiya po
spektroskopii.

Mitral Board: S.S. Landsberg, Academician, (Resp. Ed.);
S.I. Repertant, Doctor of Physical and Mathematical Sciences;
V.A. Rebrinkin, Doctor of Physical and Mathematical Sciences;
V.A. Rebrinkin, Doctor of Physical and Mathematical Sciences;
V.A. Rebrinkin, Candidate of Technical Sciences; S.M. Rayskiy,
Candidate of Physical and Mathematical Sciences; L.K. Klimovskiy,
Candidate of Physical and Mathematical Sciences; V.S. Milyutinuk
(Deceased), Doctor of Physical and Mathematical Sciences;
Glauberman, Doctor of Physical and Mathematical Sciences;
Ed.: S.L. Gaser; Tech. Ed.: I.V. Saranyuk.

FOREWORD: This book is intended for scientists and researchers in
the field of spectroscopy, as well as for technical personnel
using spectrum analysis in various industries.

COMMENT: This volume contains 177 scientific and technical studies
of atomic spectroscopy presented at the 10th All-Union Confer-
ence on Spectroscopy in 1956. The studies were carried out by
members of scientific and technical institutes and include
extensive bibliographies. The studies cover many phases of spectroscopy: spectra of rare earths,
vacuum ultraviolet radiation, physicochemical methods for controlling
atomic production, physics and technology of gas discharge,
optics and spectroscopy, abnormal dispersion in metal vapors,
spectroscopy and the combustion theory, spectrum analysis of ores
and minerals, photographic methods for quantitative spectrum
analysis of metals and alloys, spectral determination of the
hydrogen content of metals by means of isotopes, tables and
atlases of spectral lines, spark spectrographic analysis,
statistical study of variation in the parameters of calibration
curves, determination of traces of metals, spectrochemical
metallurgy, thermochemistry in metallurgy, and principles and
practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.)	307/1700
Borbat, A.M. Consideration of the Effect of Tertiary Components in the Analysis of Copper-base Alloys	435
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Card 25/31

PANIN, F.V., kado. voyennomorskikh nauk, kapitan 3-go ranga; ANDREYENKO, A.P.,
kapitan 3-go ranga

Reviews and bibliography. Mor. sbor. 48 no.9:86-92 S 165.

(MIRA 18:8)

PENZIN, V.

A complaint was lodged with the housing administration. Zhil.-kom.
khoz. 11 no.5:29 My '61. (MIRA 14:7)

1. Upravlyayushchiy domami, g. Staraya Russa, Novgorodskoy oblasti.
(Staraya Russa—Housing management)

ACC NR: AP6036863

SOURCE CODE: UR/0147/66/000/004/0114/0120

AUTHOR: Penzin, V. I.

ORG: none

TITLE: Optimal conditions of supersonic flows with oblique shocks and subsequent heat addition

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 4, 1966, 114-120

TOPIC TAGS: air fuel combustion, supersonic combustion, oblique shock, normal shock, supersonic flow, air breathing propulsion, FLOW DEFLECTION, FLOW ANGLE

ABSTRACT: An increase in flow deflection angle ω in an "oblique shock + normal shock" system results in a reduction in the pressure recovery factor σ_0 in the oblique shock and an increase in the pressure recovery factor σ_n in the normal shock. However, at a certain optimal value ω_{opt} the product $\sigma_0 \cdot \sigma_n$ reaches its maximal value. To investigate the effect of various parameters on ω_{opt} , an analysis was made of various shock systems with subsequent heat addition. It was assumed that heat addition corresponds to the combustion of kerosene in air at an air excess coefficient $\alpha = 1.1$, and the Mach number, temperature, and pressure of the free stream equal $M_f = 8$, $T_f = 230K$, and $p_f = 0.01$ bars, respectively. The calculated relationships are shown in Figures 1-5. The

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UDC: 533.6.011.5

ACC NR: AP6036863

results show that: 1) at a given heat addition intensity, the optimal flow deflection angle ω_{opt} is smaller for systems without a normal shock; 2) with an increase in the number of shocks, the difference in ω_{opt} decreases, e.g., with a single oblique shock $\Delta\omega_{opt} \approx 0.1$ rad and with two oblique shocks $\Delta\omega_{opt} \approx 0.06$ rad; however, if the number of shocks is further increased (up to $M_2 = 1$), the optimal total angles ω_{opt} become equal; 3) with the variation in heat addition intensity (type of fuel, air excess coefficient) ω_{opt} varies in the range from 0 — $(\omega_{opt})_{max}$; the $(\omega_{opt})_{max}$ corresponds to the optimal flow deflection in an "oblique shock + normal shock" system; 4) the variation of p_f over a wide range at $M_f = 8$ has only small effect on ω_{opt} ; and 5) the increase in T_f corresponds to the reduction in the heat addition and thus reduces ω_{opt} . Orig. art. has: 4 formulas and 5 figures.

Card 2/5

ACC NR: AP6036863

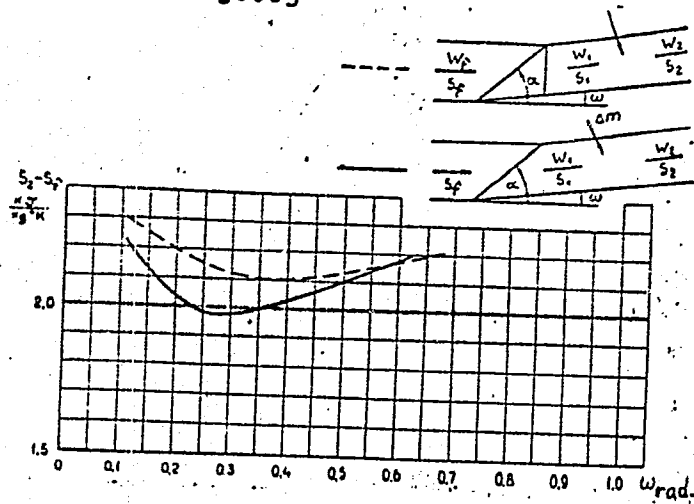


Fig. 1. Dependence of variation in $S_2 - S_f$ on ω in a system "oblique shock + normal shock + heat addition" and a system "oblique shock + heat addition."

Card 3/5

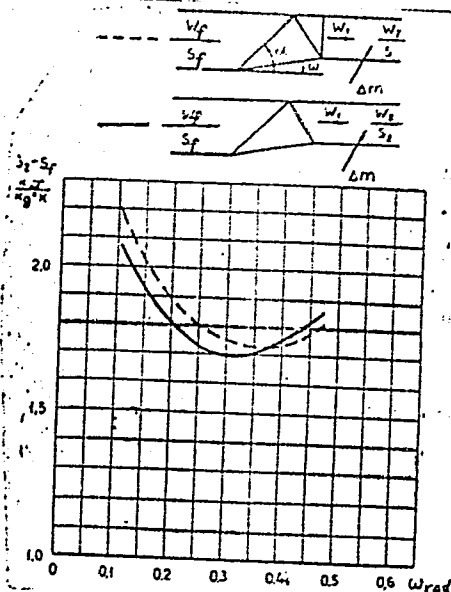


Fig. 2. Dependence of $S_2 - S_f$ on ω in a system "two oblique shocks + normal shock + heat addition" and a system "two oblique shocks + heat addition."

ACC NR: AP6036863

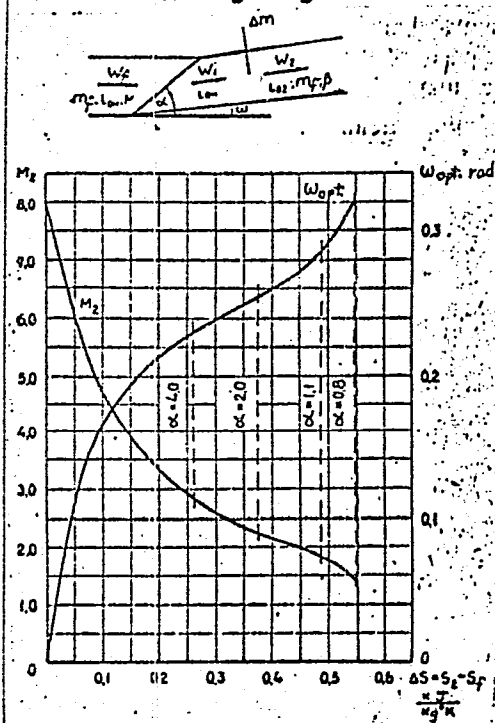


Fig. 3. Dependence of w_{opt} and M_2 on $S_2 - S_f$ at various values of an excess coefficient α in a system "oblique shock + heat addition"

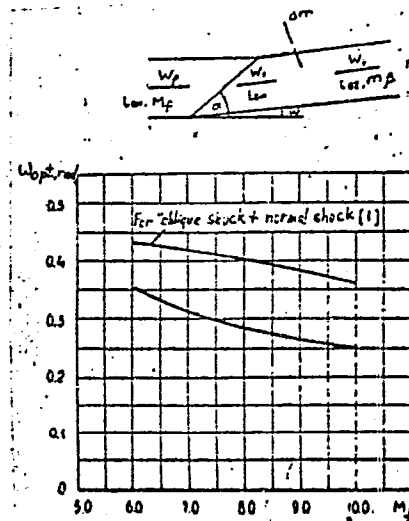


Fig. 4. Dependence of w_{opt} on M_f in a system "oblique shock + heat addition"

ACC NR: AP6036863

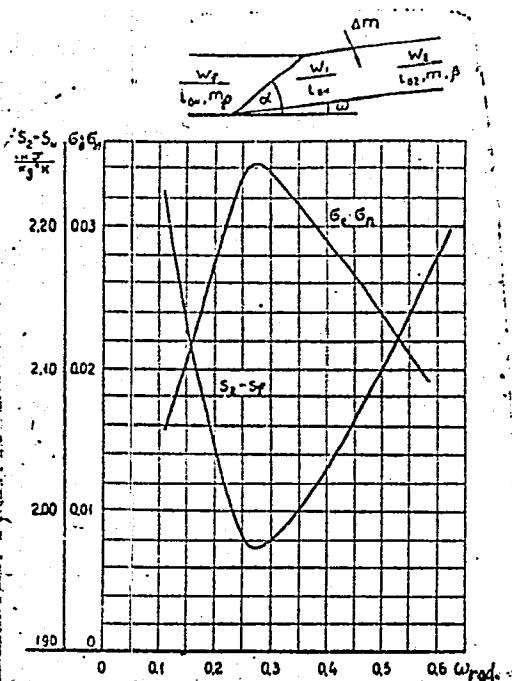


Fig. 5, Dependence of variation in $S_2 - S_f$ and

$$\sigma_0 \cdot \sigma_n = \frac{P_{02}}{P_{0f}}$$

on flow deflection angle ω in a system "oblique shock + heat addition." (S = energy, p = pressure)

SUB CODE: 21/ SUBM DATE: 09Nov65/
ORIG REF: 001

[WA-68]

Card 5/5

L 13973-55 EWP(a)/EWT(b)/EWP(t)/EWP(b) IJP(c)/AEDC(a)/AS(mp)-2/SSD/AFWL/
ASD(a)-5/ASD(m)-3/AFMDC/ESD(c)/PAEM(e)/ESD(t) JD/NH

ACCESSION NR: AP4043010 S/0051/64/017/002/0230/0234

AUTHOR: Pologrudov, V. V.; Penzin, Yu. G.; Penzina, E. E.

TITLE: Electroluminescence of diamonds ¹⁶ B

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 230-234

TOPIC TAGS: diamond, electroluminescence, luminescence brightness, spectral energy distribution, frequency dependence, phosphor

ABSTRACT: The electroluminescence described in the article was observed on diamonds insulated from the electrodes, in contrast to the practice of all earlier researchers who placed the diamond in direct contact with the electrodes so as to improve the conditions for the carrier injection as much as possible. The diamonds were placed in an alternating field so that internal electroluminescence (Destrian effect) was produced. Sixty-four out of 105 samples of Siberian diamonds exhibited a tendency to such luminescence, and

Card 1/5 ²¹

L 13973-65

ACCESSION NR: AP4043010

those which did not luminesce were essentially of regular geometrical form without visible inclusions. The diamonds ranged in thickness from 1 to 5 mm. The exciting voltage came from a step-up transformer operating at 50 cycles. Visible glow was produced at field intensities on the order of 10^3 -- 10^4 v/cm and upward. The tests have shown that at different types of excitation, the same centers participate in the glow, although the ratio of the different bands varies over a wide range. Such a difference in the spectral distribution is credited to the peculiarities of the excitation mechanism in each individual case. The variation of the brightness of the electroluminescence with the electric field intensity was the same for all diamonds, the logarithm of the intensity being inversely proportional to the reciprocal of the square root of the voltage. The frequency dependence of the electroluminescence was investigated at frequencies 250--8000 cps and at voltages from 250 to 600 v. The electroluminescence brightness increased strongly with the frequency at high voltages, but reaches saturation or even a maximum at medium and low

Cord 2/5

L 13973-65

ACCESSION NR: AP4043010

voltages. Oscillographic studies were also made of the time variation of the brightness during each cycle of the exciting voltage (brightness waves). These brightness waves were shifted in phase relative to the applied voltage, the shift differing with the type of diamond. The results demonstrate that certain types of diamonds indeed exhibit the Destriau effect and that the mechanism of glow of diamond does not differ in an alternating electric field from the electroluminescence of zinc sulfide phosphors. "We are very grateful to E. S. Vilutis for help with the work." Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: none

SUBMITTED: 21May63

ENCL: 02

SUB CODE: OP

NO REF SOV: 006

OTHER: 007

Cord 3/5

L 13973-55

ACCESSION NR: AP4043010

ENCLOSURE: 01

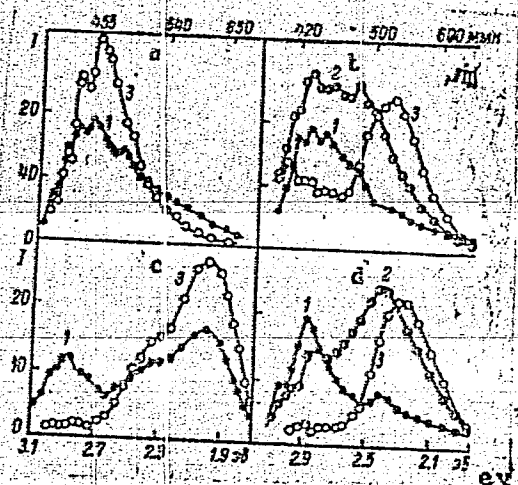


Fig. 1. Electroluminescence

1 - X-ray luminescence; 2 - and photoluminescence; 3 - spectra of diamonds for different interelectrode distances, exciting voltages, and excitation wavelengths

Card 4/5

L 13973-65

ACCESSION NR: AP4043010

ENCLOSURE: 02

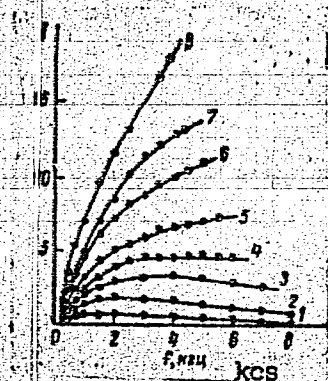


Fig. 2. Dependence of electroluminescence brightness on frequency for one sample at different excitation voltages

Card 5/5

L 43916-65 INT(1) PI-4 IJP(c)

ACCESSION NO: AP5009518

8/0049/85/022/003/0431/0432

AUTHOR: Parfimanovich, I.A.; Penzina, E.E.; Penzin, Yu. G.

26
25
E

TITLE: Induced luminescence of silver-activated alkali halide phosphors [Report, 12th Conference on Luminescence held in L'vov, 30 Jan-5 Feb 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 431-433

TOPIC TAGS: luminescence, alkali halide, silver, color center, luminescent crystal, x ray irradiation

ABSTRACT: The authors investigated the luminescence of NaCl, KBr, and NaBr phosphors activated with 1 mole percent silver. These phosphors are known to have two types of activator centers: type I, responsible for the short wavelength luminescence, and type II, responsible for a longer wavelength luminescence. The phosphors can be colored by additives or by irradiation with ionizing radiation, whereupon a number of absorption bands appear. In the present work the nature of the B and C centers is investigated. B centers were induced in KBr:Ag by x-ray irradiation. The phosphorescence found by M.L.Kats and V.N.Nikol'skiy (Sb. Fizika shchelochnogaloidnykh kristallov, p. 183. Izd. Latv. un-ta, Riga, 1962)

Card 1/3

L 43916-65

ACCESSION NR: AP5009518

for additive induced B centers was also found in the case of the x-ray induced B centers. The phosphorescence was excited both by B band radiation and by F band radiation, and the afterglow intensity was found to be strongly temperature dependent. The B centers were optically unstable. All these results are regarded as supporting the recombination mechanism for B center emission, proposed by Kats and Nikol'skiy (loc. cit.). C centers were induced in NaCl:Ag phosphors by x-irradiation. The C center concentration was found to increase on heating or storage of x-ray irradiated phosphors, from which it is concluded that ionic processes are involved. The C centers are thermally the most stable of all the induced color centers, and crystals were prepared containing practically no other induced centers. The behavior of these crystals confirmed the close relation between C centers and type II activator centers proposed by R.I.Gindina and Ch.B.Lukhchik (Tr. In-ta fiz. i. astron. AN EstSSR, no. 5, 81 (1961)). X-ray irradiation was found to reduce the luminescence from type II centers, while simultaneously increasing that from C centers, and destruction of C centers by heating was found to lead to a partial restoration of the type II center concentration. C center emission could be excited not only by C band radiation (310 mμ) but also by 245 mμ radiation, and the behavior of the emission band did not depend on how it was excited. This

Card 2/3

L 43916-65

ACCESSION NR: AP5009518

behavior is not understood; it is suggested that transfer of energy to the C center is involved. A similar short wavelength band was observed in the C center excitation spectrum of NaBr:Ag phosphors. Further experimentation is indicated. Orig. art. has: 3 figures.

ASSOCIATION: Irkutskiy gosudarstvennyy universitet (Irkutsk State University)

SUBMITTED: 00/ 12-65

EN/L: 00

SUB CODE: OP, SS

RE REF SOV: 003

OTHER: 001

Card 8/11 118

POLOGRUDOV, V.V.; PENZIN, Yu.G.; PENZINA, E.E.

Electroluminescence of diamonds. Opt. i spektr. 17 no.2:230-234
Ag'64 (MIRA 17:8)

L 39416-65 EWT(1)/EWT(M)/T/EMP(t)/EEC(b)-2/EMP(b)/EWA(c) P1-4 IJP(c)
 ACCESSION NR AP5006058 JD/JG/GG 8/0139/65/000/001/0094/0098
 AUTHOR: Parfianovich, I. A.; Penzina, E. E.; Penzin, Yu. G. 33
 32
 B
 TITLE: Photoluminescence of ionic and induced glow centers of single-crystal KBr-Ag 13
 11
 SOURCE: IVUZ. Fizika, no. 1, 1965, 94-98

TOPIC TAGS: photoluminescence, ionic center, induced center, glow center, single crystal, x irradiation

ABSTRACT: The article presents some new data on the glow of ionic and atomic silver centers in KBr-Ag phosphors. The new data include spectral characteristics of the ionic centers and of the so-called "induced" glow centers, produced in the crystal when it is exposed to x-rays. The single crystals were grown from the melt by the Kiropoulos method (the AgBr content in the melt was 1 mol.%). The spectral characteristics were investigated with a monochromator. A deuterium lamp was used as the exciting source. The x-rays were produced with a copper tube. The absorption and excitation ultraviolet spectra of the phosphor were plotted and

Card 1/2

L 39416-65

ACCESSION NR: AP5006058

an analysis of the spectra offers evidence in favor of the recombination mechanism of the afterglow produced upon excitation in the B absorption band. In addition to the blue glow of the B centers, the phosphor exposed to x-rays exhibits glow in the orange-red region of the spectrum with maximum near 600 nm, which increases upon heating. This glow was found to be due to two types of centers excited in the C and D absorption bands. Orig. art. has: 3 figures.

ASSOCIATION: Irkutskiy gosuniversitet imeni A. A. Zhdanova (Irkutsk State University)

SUBMITTED: 26 Jun 63

ENCL: 00

SUB CODE: OP, SS

HR REF SOV: 007

OTHER: 006

Card 2/2

ACCESSION NR: AP4025095

S/0139/63/000/006/0124/0128

AUTHORS: Penzina, E. E.; Penzin, Yu. G.

TITLE: On the luminescence of induced centers in KCl-Ag luminophors

SOURCE: IVUZ. Fizika, no. 6, 1963, 124-128

TOPIC TAGS: luminescence, induced center, single crystal luminophor, x-irradiation, B-center absorption, radiation spectra, yellow-green region

ABSTRACT: The luminescence of induced centers in a KCl-Ag single crystal luminophor has been studied. The luminescence and excitation spectra were recorded by means of the monochromator UM-2 and the photomultiplier FEU-27 for crystals grown from melts according to the Kiropoulos technique. The excitation source was a deuterium lamp DSFU-3. Immediately after x-irradiation both blue and weak red glows were observed in the induced center absorption spectra of KCl-Ag. The wavelengths in the yellow region were 433 and 454 m μ . The red light (from excited B-center absorptions) was observed in the wavelength region 610-680 m μ . Heating the x-rayed crystals to 170C introduced significant changes in the excitation and radiation spectra and produced a new yellow-green region with $\lambda_m = 574$ m μ . The general induced center

Card 1/2

ACCESSION NR: AP4025095

radiation spectra in KCl-Ag crystals are shown to be quite complex and require detailed investigations. "The authors are grateful to I. A. Parfianovich and Ye. I. Shuraleva for their help." Orig. art. has: 4 figures.

ASSOCIATION: Irkutskiy gosuniversitet imeni A. A. Zhdanova (Irkutsk State University)

SUBMITTED: 18Jul62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 012

Card 2/2

1 15973-65 EWP(e)/EWT(m)/EWP(t)/EWP(b) IJP(c)/AEDC(a)/AS(mp)-2/SSD/AFWL/
ASL(a)-5/ASD(m)-3/AFMDC/ESD(c)/RAET(e)/ESD(t) JD/WH
ACCESSION NR: AP4043010 S/0051/64/017/002/0230/0234

AUTHOR: Pologrudov, V. V.; Penzin, Yu. G.; Penzina, E. E.

TITLE: Electroluminescence of diamonds ⁶

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 230-234 ^B

TOPIC TAGS: diamond, electroluminescence, luminescence brightness, spectral energy distribution, frequency dependence, phosphor

ABSTRACT: The electroluminescence described in the article was observed on diamonds insulated from the electrodes, in contrast to the practice of all earlier researchers who placed the diamond in direct contact with the electrodes so as to improve the conditions for the carrier injection as much as possible. The diamonds were placed in an alternating field so that internal electroluminescence (Destriau effect) was produced. Sixty-four out of 105 samples of Siberian diamonds exhibited a tendency to such luminescence, and

Card 1/5 ²¹

L 13973-65

ACCESSION NR: AP4043010

those which did not luminesce were essentially of regular geometrical form without visible inclusions. The diamonds ranged in thickness from 1 to 5 mm. The exciting voltage came from a step-up transformer operating at 50 cycles. Visible glow was produced at field intensities on the order of 10^3 -- 10^4 v/cm and upward. The tests have shown that at different types of excitation, the same centers participate in the glow, although the ratio of the different bands varies over a wide range. Such a difference in the spectral distribution is credited to the peculiarities of the excitation mechanism in each individual case. The variation of the brightness of the electroluminescence with the electric field intensity was the same for all diamonds, the logarithm of the intensity being inversely proportional to the reciprocal of the square root of the voltage. The frequency dependence of the electroluminescence was investigated at frequencies 250--8000 cps and at voltages from 250 to 600 v. The electroluminescence brightness increased strongly with the frequency at high voltages, but reaches saturation or even a maximum at medium and low

Cord 2/5

L 13973-65

ACCESSION NR: AP4043010

voltages. Oscillographic studies were also made of the time variation of the brightness during each cycle of the exciting voltage (brightness waves). These brightness waves were shifted in phase relative to the applied voltage, the shift differing with the type of diamond. The results demonstrate that certain types of diamonds indeed exhibit the Destriau effect and that the mechanism of glow of diamond does not differ in an alternating electric field from the electroluminescence of zinc sulfide phosphors. "We are very grateful to E. S. Vilutis for help with the work." Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: none

SUBMITTED: 21 May 63

ENCL: 02

SUB CODE: OP

NO REF SOV: 006

OTHER: 007

Cord 3/5

L 13973-61

ACCESSION NR: AP4043010

ENCLOSURE: 01

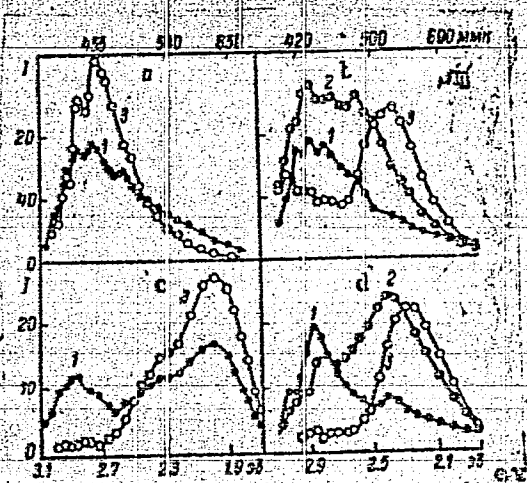


Fig. 1. Electroluminescence

1 - X-ray luminescence; 2 - and photoluminescence; 3 - spectra of diamonds for different interelectrode distances, exciting voltages, and excitation wavelengths

Card 4/5

L 13973-65

ACCESSION NR: AP4043010

ENCLOSURE: 02

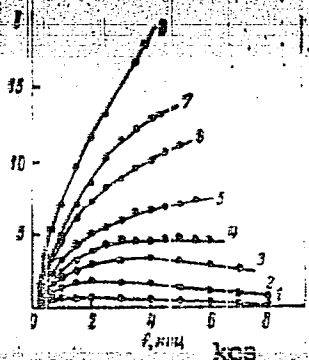


Fig. 2. Dependence of electroluminescence brightness on frequency for one sample at different excitation voltages

Card 5/5

VILUTIS, E.S.; PENZINA, E.E.

Excitation and emission spectra of Yakut diamonds. Opt. 1
spektr. 18 no.3:446-449 Mr '65. (MIRA 18:5)

L 26495-66 EWT(1)/EWT(m) IJP(c) JD/JG

ACC NR: AP5013056

SOURCE CODE: UR/0048/66/030/004/0581/0589

AUTHOR: Parfianovich, I. A.; Shuraleva, Ye. I.; Penzina, E. E.; Krongauz, V. G.ORG: Irkutsk State University (Irkutskiy gosudarstvennyy universitet)TITLE: Roentgenoluminescence of and trapping levels in NaCl and KCl crystals activated by Ag and Cu /Report, Fourteenth Conference on Luminescence held in Riga, 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 581-589

TOPIC TAGS: luminescence, thermoluminescence, luminescence center, sodium chloride, potassium chloride, crystal phosphor, *ionizing radiation, roentgenoluminescence, activated crystal, temperature dependence, electron trapping*

ABSTRACT: One of the outstanding problems in the physics of ionizing radiations is elucidation of the mechanism of roentgenoluminescence (RL). Accordingly, the purposes of the present study were to investigate the RL mechanism in Ag-activated NaCl and KCl crystals and to obtain new, comparative data on RL of like crystals activated by Cu, in view of the similarity of this activator to Ag. The work included determination of the temperature dependence of the stationary RL and recording thermostimulated and light-stimulated emission curves. The experimental data are presented mainly in the form of graphs: plots of build-up of RL, temperature dependences of the RL and glow curves, Ausleuchtung curves, optical flash curves, and absorption curves. At temperatures

Card 1/2

L 26495-66

ACC NR: AP6013056

3

above 100° C the RL spectra of all the phosphors have a principal peak associated with type I centers. NaCl:Ag^+ and NaCl:Cu^+ also exhibit an emission identified with type II centers. The KCl phosphors, however, in addition to the type I center luminescence, emit visible bands that cannot be identified with type II centers. In general, the stationary RL is made up of two components - a short-lived and a long-lived one - which are characterized by different relative intensities at different temperatures. The experimental data are analyzed at some length and some hypotheses are proposed. It is noted that the characteristic green phosphorescence of KCl:Ag is also observed, although in weaker form, in the case of "pure" KCl crystals. In view of the temperature range in which this green afterglow is evinced it is inferred that this emission is due to recombination of free electrons with V_K centers, for holes are immobilized at low temperatures. However, holes may participate in other forms of green luminescence. In general, there apparently participate in the roentgenoluminescence of alkali halide phosphors several different types of centers (including oxygen centers), some of which are more active in one temperature range, and some in another; both electron and hole processes are significant (above the temperature of self-trapping of holes), Orig. art. has: 5 figures.

SUB CODE: 20/

SUBM DATE: 00/

ORIG REF: 009/

OTH REF: 011

Card 2/2 *cc*

POLOGRUDOV, V.V.; PENZINA, E.E.

Processes taking place in excited KI - Tl phosphors when placed
in an electric field. Izv. AN SSSR. Ser.fiz. 29 no.3:497-499
Mr '65. (MIRA 18:4)

1. Irkutskiy gosudarstvennyy universitet.

L 43872-65 EWT(1)/EWT(m)/EWP(1)/EWP(b)/EWP(s)/EWP(t) P1-4 IJP(c) WH/JD
 ACCESSION NR: AP5006431 S/0051/65/018/003/0446/0449

AUTHOR: Vitulis, E. S., Penzina, E. E.

TITLE: Excitation and luminescence spectra of Yakutsk diamonds

SOURCE: Optika i spektroskopiya, v. 18, no. 3, 1965, 446-449

TOPIC TAGS: diamond, excitation spectrum, luminescence spectrum, lattice defect, color center

ABSTRACT: The authors investigated diamonds mined from different kimberlite shafts of the Yakutsk deposit. A collection of 18 samples was chosen such that it contained diamonds with blue, green, or yellow luminescence. The excitation was with a deuterium lamp whose radiation was resolved with a monochromator (UM-2) working in conjunction with a photomultiplier connected to a dc amplifier. This equipment made it possible to obtain the luminescence spectra excited by any monochromatic radiation from 210 to 400 mμ, and also the excitation spectra of any of the luminescence bands lying in the visible region. The excitation spectrum responsible for the appearance of the blue glow was found to contain bands with maxima at 230 and

Card 1/2

L-43872-65

ACCESSION NR: AP5006431

390 nm. A different luminescence mechanism is shown to be associated with each of these bands. It is concluded on the basis of the published data that the blue glow is due to centers connected with structural defects that are typical for a diamond, while the yellow-green luminescence is due to the presence of chemical impurities in the diamond. Orig. art. has: 1 figure.

ASSOCIATION: None

SUBMITTED: 23Mar64

ENCL: 00

SUB CODE: OP, MT

NR REF SOV: 006

OTHER: 011

Card 2/2 11/6

PARFIANOVICH, I.A.; PENZINA, E.E.; PENZIN, Yu.G.

Photoluminescence of ionic and induced luminescence centers in
KBr - Ag single crystals. Izv. vys. ucheb. zav.; fiz. 8 no.1:
94-98 '65. (MIRA 18:3)

1. Irkutskiy gosudarstvennyy universitet imeni Zhdanova.

PARFIANOVICH, I.A.; PENZINA, E.E.; PENZIN, Yu.G.

Induced luminescence of alkali halide phosphors activated by silver. Izv. AN SSSR. Ser.fiz. 29 no.3:431-433 Mr '65.

(MIRA 18:4)

1. Irkutskiy gosudarstvennyy universitet.

L 43916-65 EWT(1) PI-4 IJP(c)

ACCESSION NR: AP500951B

B/0048/83/029/003/0431/0433

AUTHOR: Parfyanovich, I.A.; Penzina, E.E.; Penzin, Yu. G.

TITLE: Induced luminescence of silver-activated alkali halide phosphors [Report, 12th Conference on Luminescence held in L'vov, 30 Jan-5 Feb 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 431-433

TOPIC TAGS: luminescence, alkali halide, silver, color center, luminescent crystal, x ray irradiation

ABSTRACT: The authors investigated the luminescence of NaCl, KBr, and NaBr phosphors activated with 1 mole percent silver. These phosphors are known to have two types of activator centers: type I, responsible for the short wavelength luminescence, and type II, responsible for a longer wavelength luminescence. The phosphors can be colored by additives or by irradiation with ionizing radiation, whereupon a number of absorption bands appear. In the present work the nature of the B and C centers is investigated. B centers were induced in KBr:Ag by x-ray irradiation. The phosphorescence found by M.L.Kats and V.N.Nikol'skiy (Sb. Fizika shchelochnogal'goidnykh kristallov, p. 183. Izd. Latv. univ., Riga, 1962)

Card 1/3

L 43916-65

ACCESSION NR: AP5009518

for additive induced B centers was also found in the case of the x-ray induced B centers. The phosphorescence was excited both by B band radiation and by F band radiation, and the afterglow intensity was found to be strongly temperature dependent. The B centers were optically unstable. All these results are regarded as supporting the recombination mechanism for B center emission, proposed by Kats and Nikol'skiy (loc. cit.). C centers were induced in NaCl:Ag phosphors by x-irradiation. The C center concentration was found to increase on heating or storage of x-ray irradiated phosphors, from which it is concluded that ionic processes are involved. The C centers are thermally the most stable of all the induced color centers, and crystals were prepared containing practically no other induced centers. The behavior of these crystals confirmed the close relation between C centers and type II activator centers proposed by R.I. Gindina and Ch.B. Iushchik (Tr. In-ta fiz. i. astron. AN EstSR, no. 5, 81 (1961)). X-ray irradiation was found to reduce the luminescence from type II centers, while simultaneously increasing that from C centers, and destruction of C centers by heating was found to lead to a partial restoration of the type II center concentration. C center emission could be excited not only by C band radiation (210 mμ) but also by 245 mμ radiation, and the behavior of the emission band did not depend on how it was excited. This

Card 2/3

L 43916-65

ACCESSION NO: AP6009518

behavior is not understood; it is suggested that transfer of energy to the C center is involved. A similar short wavelength band was observed in the C center excitation spectra of NaBr:Ag phosphors. Further experimentation is indicated. Orig. art. has: 3 figures.

ASSOCIATION: Irkutskiy gosudarstvennyy universitet (Irkutsk State University)

SUBMITTED: 00/ --1965

ENCL: 00

SUB CODE: CP, 85

RR REP SOV: 003

OTHER: 001

Card 3/3, 1/1

43270-65 EWT(1)/EWT(2)/EWP(t)/EWP(b) P1-4 IJP(c) JD

ACCESSION NR: AP5009531

S/0048/65/029/003/0497/0499

AUTHOR: Polozhukov, V.V.; Penzina, E.E.

TITLE: Investigation of the processes occurring in excited thallium activated potassium iodide phosphors upon application of an electric field /Report, 12th Conference on Luminescence held in L'vov 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 497-499

TOPIC TAGS: luminescence, alkali halide, potassium compound, iodine compound, thallium, x ray, photoluminescence, electric field

ABSTRACT: The authors have investigated the influence of a 5×10^4 V/cm 50 c/sec electric field on the roentgenoluminescence and photoluminescence of KI:Tl phosphors. The electric field had both a quenching and a stimulating effect on the roentgenoluminescence. When the activator concentration was large (c. 1 mole per cent) and the stimulating x-ray intensity was low, the quenching effect was predominant. Under some conditions both effects could be observed, the fluorescence intensity decreased immediately when the field was applied and subsequently increased beyond its initial value. There are two bands in the photoluminescence spectrum. Thermal

Card 1/2

L 49270-55

ACCESSION NR: AP5009531

quenching was observed in both bands, and most strongly in the shorter wavelength band; when the temperature was increased from room temperature the photoluminescence intensity decreased and the peaks of both excitation bands shifted toward the longer wavelengths. The thermal quenching was observed as soon as the temperature was raised above room temperature. This is in contradiction with the finding of K.K.Shvarts (Tr. In-ta fiz. i astron. AN EstSR, No. 7, 153 (1958)). It is suggested that this discrepancy may be due to Shvarts' failure to take account of the shift in the positions of the excitation bands. The results are discussed briefly. The most likely mechanism for the stimulation of the luminescence by an electric field is considered to be the reduction by the action of the field of the number of nonradiative recombinations outside the luminescence centers. More data will be required before the true mechanism can be determined. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: OP, SS

NR REF SOV: 005

OTHER: 005

File
Card 2/2

L 39416-65 EWT(1)/EWT(n)/T/EMP(t)/EEC(b)-2/EMP(b)/EWA(c) Pi-4 IJP(c)
 ACCESSION NR: AP5006058 JD/JG/GG 8/0139/65/000/001/0094/0098
 AUTHOR: Parfianovich, I. A.; Penzina, E. E.; Penzin, Yu. G.

TITLE: Photoluminescence of ionic and induced glow centers of single-crystal
KBr-Ag

SOURCE: IVUZ. Fizika, no. 1, 1965, 94-98

TOPIC TAGS: photoluminescence, ionic center, induced center, glow center, single crystal, x irradiation

ABSTRACT: The article presents some new data on the glow of ionic and atomic silver centers in KBr-Ag phosphor. The new data include spectral characteristics

crystal when it is exposed to x-rays. The single crystals were grown from the melt by the Kiropoulos method (the AgBr content in the melt was 1 mol.%). The spectral characteristics were investigated with a monochromator. A deuterium lamp was used as the exciting source. The x-rays were produced with a copper tube. The absorption and excitation ultraviolet spectra of the phosphor were plotted and

Card 1/2

L 39416-65

ACCESSION NR AP5006058

an analysis of the spectra offers evidence in favor of the recombination mechanism of the afterglow produced upon excitation in the B absorption band. In addition to the blue glow of the B centers, the phosphor exposed to x-rays exhibits glow in the orange-red region of the spectrum with maximum near 600 nm, which increases upon heating. This glow was found to be due to two types of centers excited in the C and D absorption bands. Orig. art. has: 3 figures.

ASSOCIATION: Irkutskiy gosuniversitet imeni A. A. Zhdanova (Irkutsk State University)

SUBMITTED: 26Jun63

ENCL: 00

SUB CODE: OF, SS

NR REF SOV: 007

OTHER: 006

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Card 2/2

ACCESSION NR: AP4025095

S/0139/63/000/006/0124/0128

AUTHORS: Penzina, E. E.; Penzin, Yu. G.

TITLE: On the luminescence of induced centers in KCl-Ag luminophors

SOURCE: IVUZ. Fizika, no. 6, 1963, 124-128

TOPIC TAGS: luminescence, induced center, single crystal luminophor, x-irradiation, B-center absorption, radiation spectra, yellow-green region

ABSTRACT: The luminescence of induced centers in a KCl-Ag single crystal luminophor has been studied. The luminescence and excitation spectra were recorded by means of the monochromator UM-2 and the photomultiplier FEU-27 for crystals grown from melts according to the Kiropoulos technique. The excitation source was a deuterium lamp DSFU-3. Immediately after x-irradiation both blue and weak red glows were observed in the induced center absorption spectra of KCl-Ag. The wavelengths in the yellow region were 433 and 454 m μ . The red light (from excited B-center absorptions) was observed in the wavelength region 610-680 m μ . Heating the x-rayed crystals to 170C introduced significant changes in the excitation and radiation spectra and produced a new yellow-green region with $\lambda_m = 574$ m μ . The general induced center

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ACCESSION NR: AP4025095

radiation spectra in KCl-Ag crystals are shown to be quite complex and require detailed investigations. "The authors are grateful to I. A. Parfianovich and Ye. I. Shuraleva for their help." Orig. art. has: 4 figures.

ASSOCIATION: Irkutskiy gosuniversitet imeni A. A. Zhdanova (Irkutsk State University)

SUBMITTED: 18Jul62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: FE

NO REF SOV: 003

OTHER: 012

Card 2/2

POLOGRUDOV, V.V.; PINZIN, Ya.G.; PINZINA, E.E.

Electroluminescence of diamonds. Opt. i spektr. 17 no.2:230-234
Ag'64 (MIRA 17:8)

PENZINA, E.E.; PENZIN, Yu.G.

Induced luminescence centers in KCL - Ag phosphors. Izv. vye. ucheb. zav.;
fiz. no.6:124-128 '63. (MIRA 17:2)

1. Irkutskiy gosudarstvennyy universitet imeni Zhdanova.

PENZINA, E.E.; PENZIN, Yu.G.

Induced luminescence centers in KCL - Ag phosphors. Izv. vys. ucheb. zav.;
fiz. no.6:124-128 '63. (MIRA 17:2)

1. Irkutskiy gosudarstvennyy universitet imeni Zhdanova.

DENISOV, V.F.; PENZINA, M.I.

Cooling of gases from furnaces for the fluidized roasting of zinc concentrates. TSvet.met. 34 no.9:42-48 S '61. (MIRA 14:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh metallov.

(Gases--Cooling) (Zinc--Metallurgy)

PENZOV, Yu.

Klassifikatsiya odnokomponentnykh differentsial'nykh geometricheskikh ob'yektov *klassa*
v. DAN, 54 (1946), 567-570.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.,
Markushevich, A.I.,
Rashevskiy, P.K.
Moscow-Leningrad, 1948

PENZOV, YU. YE.

16(1) PAPER 1 BOOK ENTERTAINMENT NOV/1968

Trudy seminarov i konferentsiy matematicheskogo instituta imeni L. D. Landau
 geometrii, matematiki i fiziki, 77: 8 (Transactions of the seminar on
 geometry, mathematics and physics, 77: 8) Moscow, Gostizdat, 1970. 469 p. 1,500 copies
 printed.

Ed. (title page): V.P. Rago, Professor; Ed. (inside book): I.M.
 Yaglom, Tech. Ed.: N.Ye. Murashov.

PURPOSE: This book is intended for professional mathematicians, especially
 geometers, and for physicists.

CONTENTS: This book contains some contributions to geometry presented by various
 leading Soviet mathematicians at the Seminar on Vector and Tensor Analysis held
 from January 1, 1968 to July 1, 1969. Applications to physics and mechanics
 are not discussed in any detail. However, each article is significant for its possible
 applications in physics, especially the three articles by V. V. Vagner. In his

Card 2/5

article "The Theory of a Coupled Manifold," Vagner constructs a general theory
 of objects, which turns out to be a generalization of affine analysis, and de-
 termines the operation of the absolute total differentiation, which is important
 to the applications of variational calculus, for the field of any local differ-
 ential object. In his second article, "The Geometry of a Space with a Riemannian
 Metric as the Theory of a Field of Local Hyperurfaces," Vagner gives the construction
 of the corresponding variational problem in the theory of a field of local hyperurfaces
 and the application of this theory to rigid mechanical systems with nonlinear
 connections. The following persons submitted reports to the seminar which are
 not contained in the book: A. P. Rodin, V.P. Rago, D.L. Pines, N.Ye. Murashov,
 S.A. Moskatel's, P.K. Koshchuk, Ye.S. Dubov, V.V. Vagner, I.M. Yaglom,
 A.Ye. Lerner, V.M. Shyrtlov, D.S. Poloskov, M.O. Freidlin, M.A. Meller,
 G.B. Gurvich, A.M. Lopatits, N.Ye. Yefimov, I.P. Yegorov, and Yu.A. Surinov.

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Card 3/5

PENZOV, YU. E.

Penzov, Yu. E. On bundles of one-dimensional geometric objects in an X_r of class ≥ 2 . Dokl. Akad. Nauk SSSR (NSA) 104 (1955), 336-339. (Russian)

In this paper the author considers equivalence classes of bundles of geometric objects defined on a manifold X_r of dimension n and class C . Let Y be a Hausdorff space acted on effectively by a group G and let $h(s)$ be a homomorphism of the full differential group $\mathfrak{G}_s$ (for definition see Hanzl and Laman, Nederl. Akad. Wetensch. Proc. Ser. A. 56 (1953), 208-215; MR 15, 950) onto G depending continuously on $s \in X_r$. Then if $u \in \mathfrak{G}_s$ and V_1, V_2 are coordinate neighborhoods on X_r , the equations of change of coordinates and their derivatives determine in a natural fashion an element $\gamma_u(s)$ of G for each $s \in V_1 \cap V_2$. Then $g_u(s) = h(s)(\gamma_u(s))$ determine coordinate transformations of a bundle over X_r with fibre Y . Such a bundle is called a bundle of differential geometric objects of class γ . If G acts transitively on Y the bundle is said to be transitive. With the assumption that $h(s)$ is constant the author determines the transitive bundles of class ≥ 2 on a one-dimensional base space X_1 ; those of class one having been determined by Hanzl and Laman. In this special case $\mathfrak{G}_s$ becomes a Lie group. Pair equivalence classes are distinguished, and their coordinate transformations are explicitly given. R. M. Boothby (Evanson, Ill.)

Math.

D-FW

PENZOV, Yu. E.

Penzov, Yu. E. The classification of continuous pseudo-
groups of Lie transformations in X_n according to their
characteristic objects. Izv. Akad. Nauk SSSR Ser. A

Analiz 8, 342-413 (1950). (Russian)

The indicated classification is based on the method of Lie, Cartan, and Vagner. In X_n with coordinates x^i , a geometrical object is defined by N components $\Omega^i = \Omega^i(x)$. The law of transformation of such an object is $\Omega^i = P^i\{\Omega^j; f^j_{x^1}, \dots, f^j_{x^n}(x)\}$, $s = 1, 2, \dots, n$, if this object is of class r and

$$f^j_{x^1} \dots f^j_{x^s} = \partial^s \Omega^j / \partial x^1 \dots \partial x^s.$$

If there exists a transformation $x^i = \varphi^i(x)$ such that $\Omega^i = \Omega^i$, the object is said to be invariant under this transformation and obviously these transformations form a pseudogroup. By using Lie's method for obtaining the invariants of an extended Lie pseudogroup the author divides the pseudo

groups into three categories: 1) transitive and 2) intransitive and 3) nontransitive. Among the transitive groups 1 and 2 are infinite and 3 are finite and among the intransitive ones 1 is infinite and 2 is finite. The third category contains 1 infinite transitive groups and 2 infinite and 1 finite intransitive group. In each case the author gives the characteristic object. For $n \geq 4$ there are seven pseudogroups that were given by Cartan but the author "did not succeed in obtaining the characteristic object for general n ".

M. S. Knebelman (Pullman, Wash.).

Source: Mathematical Reviews,

Vol. 12 No. 1

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PENZOV, YU. YE.

PA 159T38

USSR/Mathematics - Differential
Geometry (Contd) Mar/Apr 50

"Differential-Geometric Objects of Class v in X_1 ,"
Yu. Ye. Penzov, Saratov, 22 pp

"Matemat Sbor" Vol XXVI, No 2

V. V. Vagner developed general theory of geometric
objects (see his "Theory of Geometric Objects and
Theory of Finite and Infinite Continuous Transforma-
tion Groups," in "Dok Ak Nauk SSSR," Vol XLVI, No 9,
1945; also "Theory of Differential Objects and Funda-
mentals of Differential Geometry: A Supplement to

159T38

USSR/Mathematics - Differential
Geometry (Contd) Mar/Apr 50

Vebien and Whitehead's 'Fundamentals of Differen-
tial Geometry,' Moscow, 1949). In particular, he
established remarkable relation between differential-
geometric objects of class v and continuous trans-
formation groups of Lie, which permitted him to in-
dicate general method of finding all types of d-g
objects. Here, Penzov employs this general method
of Vagner to find d-g objects of class v in X_1 , and
to solve problem of maximum class and give complete
classification of one- and two-component objects.
Submitted 5 Aug 47.

159T38

Pentav. Yu. E. The classification of geometric differential
with two components. Doklady Akad. Nauk
SSSR N.S. 89, 531-540 (1951). (Russian.)

This is an elaboration of ideas of Vagner (same Doklady
46, 347-349 (1945); 69, 293-296 (1949); these Rev. 7, 265;
11, 461] for the case that a geometric object Ω has two
components. The case of one component has already been
solved by the author (ibid. 54, 563-566 (1946); these Rev.
9, 67]. Now it is shown that in an X_n , $n \geq 2$, the class of
objects Ω with two components does not exceed 2. In an
 X_n , $n \geq 4$, there are no such objects of the first class. Every
such object of the first class in X_n is similar to a co- or con-
travariant object K which transforms as follows:

$$K'_a = (A'_a K_a + A'_a) (A'_a K_a + A'_a)^{-1},$$

$$K'^a = (A'^a K_a + A'^a) (A'^a K_a + A'^a)^{-1}.$$

Every such object of the first class in X_n is similar to one of
the following objects: 1) a covariant vector density of weight
one; 2) a combination of two objects K ; 3) the union of a
scalar density of weight 1 and an object K ; 4) the ratio of
two components of a covariant tensor to its third com-
ponent.

D. J. Strick (Cambridge, Mass.).

Source:

Vol.

No.